Emergency Nutritional Support and Capacity Building of Community Health Workers
Bujumbura Rural – Concern Burundi

DFD-G-00-04-00018-00

Final Report
January 12 - Dec 30 2004

Submitted April 2005

Acronyms

BPS	Bureau Provincial de la Santé – Provincial Health Services Office
CHW	Community Health Worker
CTC	Community Therapeutic Care
OW	Outreach Worker
MOH	Ministry of Health
PD	Positive Deviancy
PM	Program Manager
SFC	Supplementary Feeding Center
SFP	Supplementary Feeding Program
TFC	Therapeutic Feeding Centre
TL	Team Leader

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I. Impact measurement

Throughout Concern Worldwide Burundi's reports, we have noted that during the course of the intervention that it has not yet been possible to carry out a nutrition survey that would provide the program with reliable baseline date. In this regard, the security situation, which has not changed to any significant degree over the reporting period, represented a difficult barrier to the assessment of the nutritional status of the population of Bujumbura Rural.

The issue of measuring impact is therefore still deeply problematic in the absence of such key data. Indeed, the security situation still prevailing in Bujumbura Rural continues to prevent any extensive nutritional survey from being carried out. Therefore, the program is unable to directly assess the achievement of its main goal to any significant degree – that is, the reduction of malnutrition to 5% in Bujumbura Rural. That said, during the reporting period, plans were made to carry out a short nutrition survey in early 2005, largely on the basis of a predicted increase in security due to the holding of the constitutional referendum in February 2005 (and subsequent local, provincial, parliamentary and presidential elections now that all major political groups (apart from the FNL) have joined the formal political process).

II. Objective achievements

Objective:
In each of the target sites, to contribute towards reducing the level of global malnutrition to 5%

a. Description of assessments and surveillance data used to measure results

The SFP gathers the following data to measure results:

- Number of admissions and exits to SFCs
- Number of beneficiaries discharged without weight gain, that have abandoned or have recovered
- Number of screened and referred beneficiaries
- Number of women able to explain steps that will improve the nutritional status of their child

Monitoring records comply with the MoH formats. The 3 SFC supervisors and 12 Outreach Workers (OWs) record data on a daily basis which is checked weekly by the Program Manager (PM) to ensure its veracity (reports are then compiled in Bujumbura Rural on a monthly basis to assess the 'achievement' levels). The Team Leader is then responsible for assessing the results and then defining strategies that will improve the program effectiveness.

b. Total number of targeted beneficiaries: 16,788 malnourished children under 5 and 4,956 pregnant and lactating women and children under 5

Total number of reached beneficiaries: 2,132 malnourished children under 5, 2,235 malnourished pregnant and lactating women, and 2,778 children between 5 and 17 years old and 102 adults

c. Qualitative and quantitative data that reflect results

- **Result 1 Three Supplementary Feeding Centres**

Indicator: 64% of the estimated malnourished targeted population is benefiting from SFC services

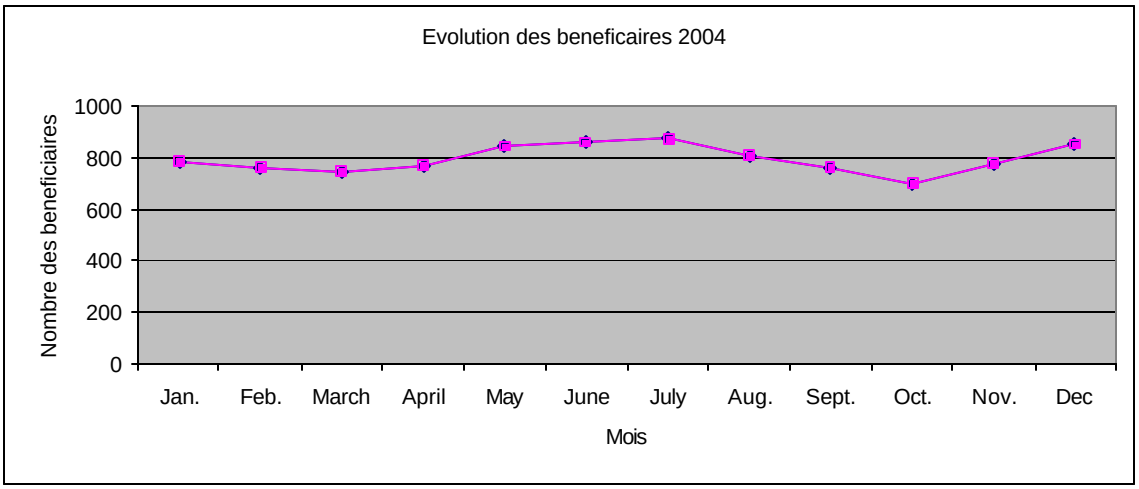
The SFCs of Karinzi (Mutambu commune) and its extension at Mayuyu (12 km away) and Muhuta (Muhuta commune) have been operational throughout the year. The SFCs have provided supplementary

feeding rations to a total of 9553 of beneficiaries (72 % of which are children and adolescents), which represents an average of 574 children and adolescent and 213 pregnant and lactating women per month.

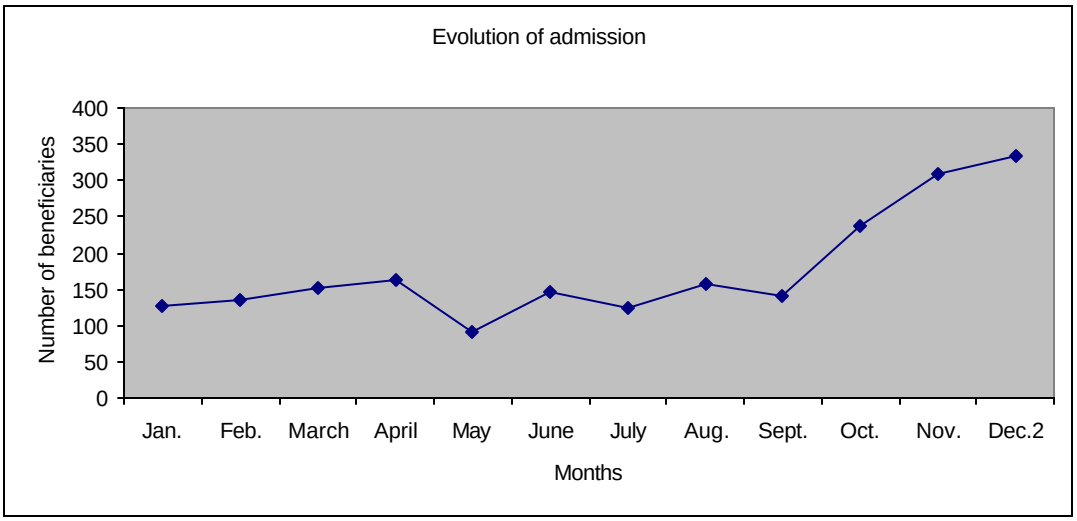
Table 1 Total number of beneficiaries cared for at the three SFCs at the end of each month

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec	Total
Children under 5 years	197	191	200	242	262	265	267	251	257	260	285	297	2974
Children 5-17 years	349	322	296	281	325	335	340	325	305	286	345	398	3907
Adults	9	9	13	12	13	14	13	12	7	4	8	4	118
Pregnant and lactating women	231	241	240	236	243	249	256	221	191	150	138	158	2554
Total at the end of the month	786	763	749	771	843	863	876	809	760	700	776	857	9553

SFC beneficiary's evolution during 2004 year



Evolution of new admissions



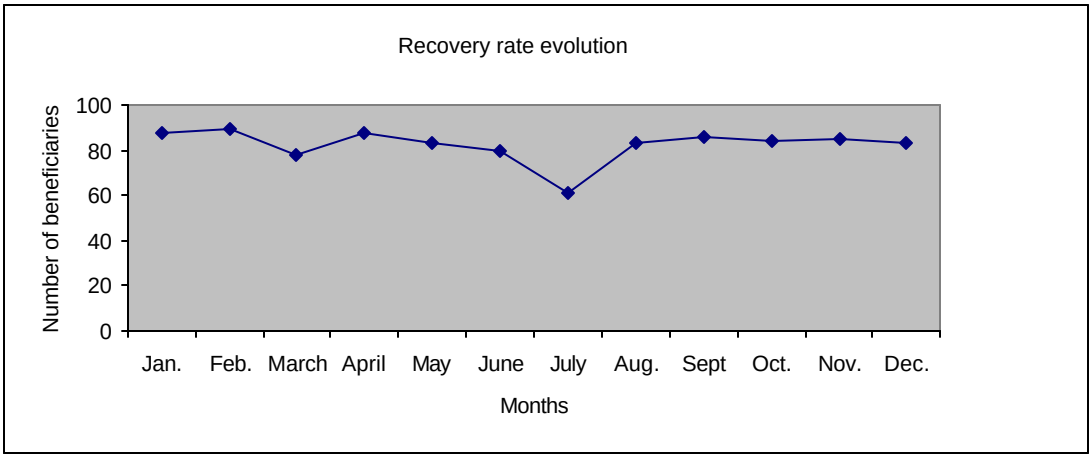
Indicator: Recovery rate is above 75%
Default rate is less than 15%
Exit without weight gain is less than 15%
Death rate is less than 3% among moderately malnourished children

Performances of the SFCs conform to accepted international standards as the table below representing an average of the performance indicators of the SFCs of Karenzi, Muhuta and Mayuyu show.

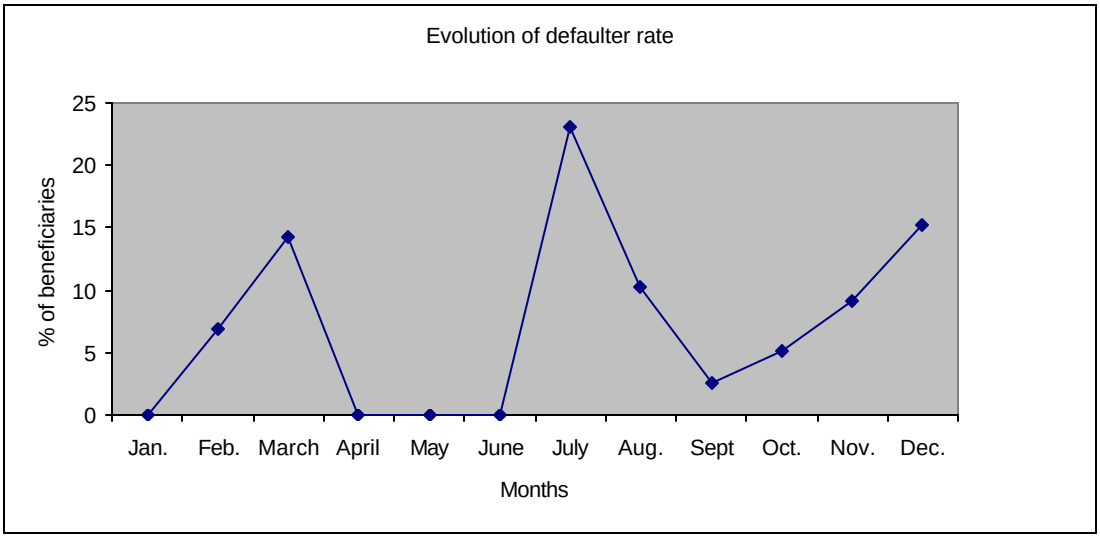
Table 2 Average performance indicators of the three SFCs

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Average
Recovery rate.	88	89.2	78.2	87.5	83.3	80	61.5	82.8	86.2	83.8	85.2	83.4	81.9
Defaulter	0	6.9	14.2	0	0	0	23.1	10.3	2.6	5.1	9.1	15.2	6.3
Exit without weight gain rate	11.1	3.9	7.6	12.5	16.6	20	15.4	6.9	11.2	11.	6.1	8.1	11.8
Death rate	0	0	0	0	0.1	0	0	0	0	0	0	0	0

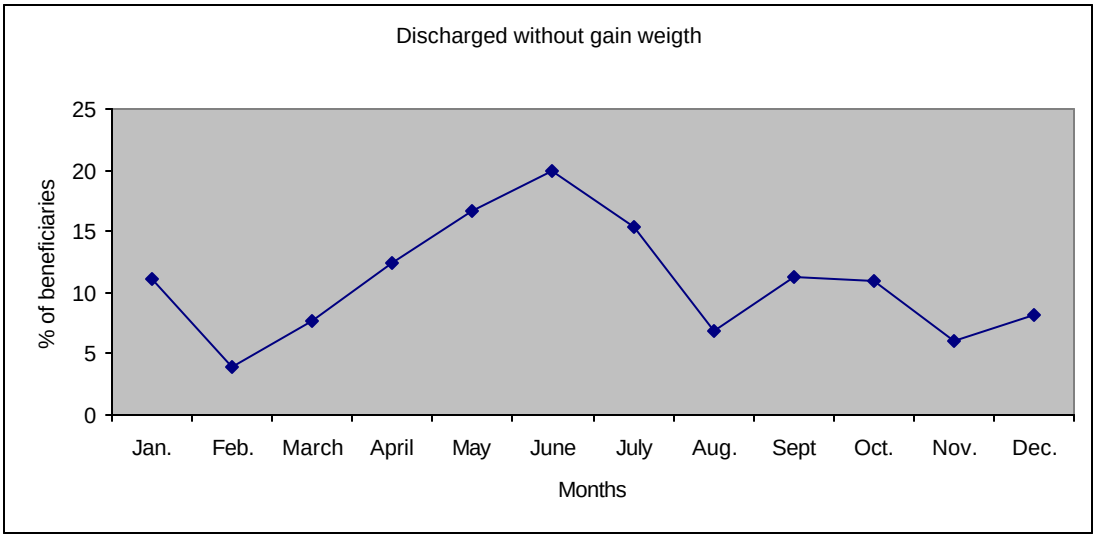
Evolution of recovery rate



Evolution of defaulter rate



Evolution of discharged without gain weight



As shown in the table, performance indicators meet Sphere and national standards[1]:
- the recovery rate is above 75%
- the default rate is less than 15%
- the exit without weight gain is less than 15%
- the death rate is less than 3% among moderately malnourished children

High rates of default are noticeable in July due to the fact that all three communes suffered heavily from FNL attacks. Most referred children and pregnant and lactating women had therefore no access to the SFC and had to abandon treatment.

The high rates of exit without weight gain in May and June (while the rate of defaulter is zero) can be explained by the prevalence among beneficiaries of pathologies (tuberculoses, malaria, HIV/AIDS etc.) that lead to malnutrition. In such cases, beneficiaries are referred to the health centers.

- **Result 2 Outreach screening and extension services for each area**

Indicator: 80% of screened population (children and women) identified as malnourished actually attend the SFC they have been referred to.

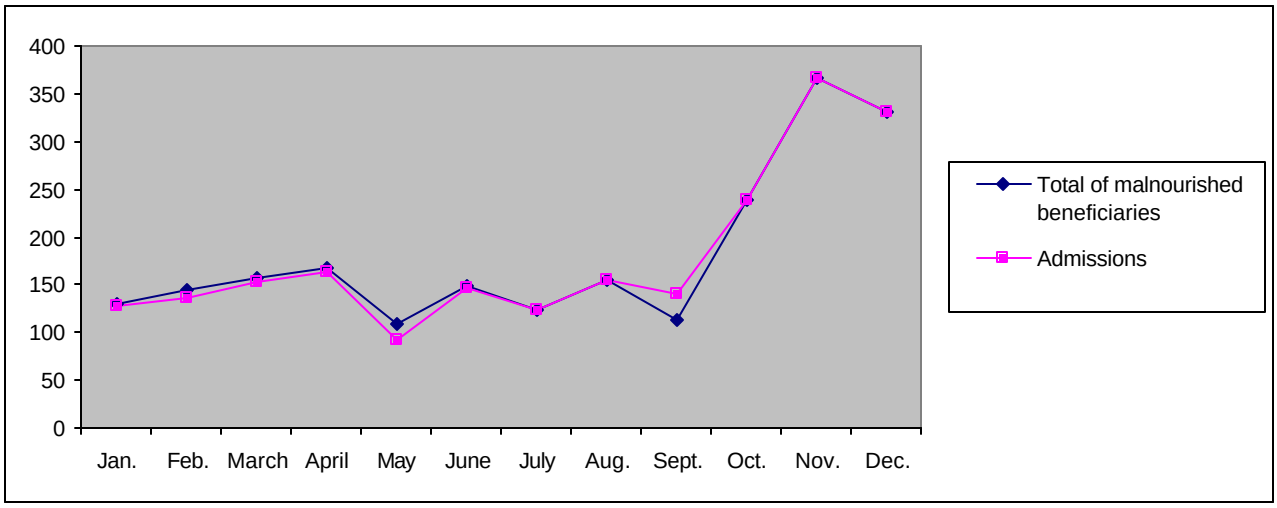
On average, throughout the reporting period, more than 97% of the screened children and pregnant and lactating women identified as malnourished attend the SFC that they were referred to as indicated in the table below.

[1] *Protocole National de Nutrition du Burundi*, August 2002, MoH & UNICEF & The Sphere Project, *Humanitarian Charter and Minimum Standards in Disaster Response*, 2004, Geneva, The Sphere Project

Table 3 Percentage of screened population (children and women) identified as malnourished that attend the SFC that they were referred to

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Total of malnourished beneficiaries	129	145	158	167	109	149	124	156	113	239	367	330	2178
Admissions	127	136	152	163	92	147	123	156	140[2]	237	310	334	2117
Percentage of screened population identified as malnourished admitted to the SFC	98.4%	93%	96.2%	97.6%	84.4%	98.6%	99.1%	100%	100%	99.2%	84.5%	100%	97 %

Evolution of screened malnutrition and new admission



Indicator: 80% of the target group is screened

The performance indicator of 80% has not yet been reached as indicated by the tables below. 35.7 % of the targeted number of children under 5 and 52.4 % of the targeted pregnant and lactating women has been screened. This situation is largely explained by the relatively poor security situation within Bujumbura Rural in which a number of locations are simply not accessible due to the presence of FNL troops. The SFP indeed limits its screening activities to safe areas in order to protect its staff and beneficiaries from increased risk in an already insecure area of the country. However, as noted above, political developments scheduled for early 2005 indicate a more optimistic future for screening activities in this regard.

Table 4 Screened population over the reporting period

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Screened children between 5 and 17	387	343	548	545	247	532	364	674	625	744	1021	1410	8173
Screened children under 5	293	267	568	509	207	390	539	371	487	566	680	742	5619
Screened pregnant and lactating women	160	130	273	38	50	56	179	184	300	281	300	214	2165
Total of screened people	840	740	1389	1092	504	978	1082	1229	1412	4059	2001	2366	15957

[2] The higher number of admission compared to the screened malnourished beneficiaries is linked to the fact that some women spontaneously come to the SFC to get screened or to screen their children

Table 5 Percentage of target group screened

	Estimated number of pregnant and lactating women	Estimated number of children under 5	Number of pregnant and lactating women screened and % of target group	Number of screened children under 5 and % of target group
Area of intervention	4,131	15,738	2165 – 52.4 %	5619 – 35.7 %

Indicator: 80% of SFCs clients can explain steps they will take to improve the nutritional status of their child during an exit interview

All beneficiaries received education on health and nutrition either through the use of "images boxes" materials or role-play. Education sessions systematically take place on the distribution days, with the 4 sessions a month covering the following topics:

- Preparation of pre-mix, its contents and role in the diet
- Causes of malnutrition and preventive measures
- Symptoms of malnutrition
- Food groups
- Cooking demonstrations on a balanced diet using local produce
- Promotion of breast feeding
- Hygiene (environmental, water, body and food)

During the exit interviews conducted over the reporting period, 70% of clients could explain the steps they would take to improve the nutritional status of their child. The relatively low percentage is probably due to the fact that the person accompanying the child to the SFC on days of distribution is not always the same and therefore has not always benefited fully from the education sessions.

- **Result 3 Training of CHWs**

Indicator: 180 CHWs are able to carry out their screening duties

The CHWs participated in training sessions which have covered:
- basic nutrition knowledge so as to make sure they all shared the same degree of understanding as well as on data collection methodologies
- data collecting
- epidemiological knowledge of malnutrition
- screening and referral of malnutrition cases

As a result of their training, the CHWs are now able to precisely measure the weight, height and MUAC of patients and refer accordingly. In matters of identification of malnutrition cases and search of defaulters, Concern Worldwide Burundi believes the impact of CHWs has been significant - children referred to the SFC have been properly diagnosed and 'errors' are rare as the CHWs have learned to be careful and take appropriate action. Unfortunately, due to problems related to their schedules, 8 staff members of the BPS have yet to be trained in the management and follow up of the CHWs work (as recommended on the Government of Burundi's policy re CHW management). It is envisaged that this training will take place in the next reporting period of the program.

d. Discussion on the overall performance of the project including details of any discrepancies between expected and actual results and any recommendations for improving the design of the program

The overall performance of the program can be realistically classified as 'good' within an often difficult and challenging operational environment. In particular, attention is drawn to the performance of the SFCs; clients are, for example, likely to recover due to the treatment received there and improvements in client knowledge regarding appropriate feeding practices and malnutrition. Despite these achievements, the following have not been met:

- 5% malnutrition rate in the communes of intervention
- 64% of the estimated number of malnourished people are cared for in the SFP
- 80% of the estimated number of pregnant and lactating women and children under 5 are screened

Even though discrepancies are observed between expected and actual results, the latter remain satisfactory given the security situation—few nutrition activities are easily carried out in a situation of complex emergency. The SFP has managed to cope with the situation and produce a good quality of work no matter the difficulties faced. In this regard, as noted previously, the political developments which Burundi should experience in 2005 bode well for a program already well known and rooted in Bujumbura Rural.

Indicator: 5% of malnutrition rate in the communes of intervention

The rate of malnutrition has not yet been reduced to an acceptable level. The percentage of malnourished among the pregnant and lactating women and children less than 5 years old screened is still relatively high as indicated in the table above. Furthermore, often the CHWs and OWs tend to screen children and pregnant and lactating women in the field they perceive as suffering from malnutrition; therefore rates often reflect high levels of malnutrition among children and pregnant and lactating women that are physically likely to be suffering from it. The following figures should also be viewed cautiously as they do not result from a scientific nutritional survey. However, the data can be used as an indirect measure of levels of malnutrition nonetheless.

Table 6 Percentage of malnourished among children under 5 screened

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Number of malnourished children under 5	41	39	53	74	33	55	44	52	39	91	131	113	1195
Number of children under 5 screened	293	267	568	509	207	390	539	371	487	566	680	742	5619
Percentage of malnourished among children under 5 screened	14%	14.6%	9.3%	14.5%	16%	14.1%	8.1%	14%	8%	16 %	19.3%	15.2%	21.3 %

Table 7 Percentage of malnourished among pregnant and lactating women screened

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec	Total
Number of malnourished pregnant and lactating women	38	47	45	25	26	30	39	36	24	33	55	42	440
Number of pregnant and lactating women screened	160	130	273	38	50	56	179	184	150	162	300	214	2560
Percentage of malnourished among pregnant and lactating women screened	23.7%	36.1%	16.4%	65.7%	52%	53.5%	21.8%	19.6%	16%	20.4%	18.3%	19.6%	17.2%

The threshold of 10% (which is used by the Sphere project to indicate emergency situations) of global acute malnutrition is often exceeded. The nutritional status of Bujumbura Rural population is therefore, still giving rise to significant concern. The lack of improvement of the nutritional status of the population of Bujumbura Rural can be explained by several factors:

- insecurity that prevents the population from accessing its lands and cultivating appropriately
- insecurity that entails looting of the population's cattle and harvest
- food insecurity due to poor fertility of land which, in turn, reflects a short term mindset
- erratic cultural seasons with sudden rains and (relative) droughts

Indicator: 64% of the estimated numbers of malnourished people are treated by the SFP

At the time of reporting, 18.9 % and 61.8 % (respectively) of the estimated malnourished children less than 5 years old and pregnant and lactating women have been treated by the SFP. Actual indicators are, given the security situation, satisfactory. The 'failure' of the program to reach a larger percentage of the population is due largely to, (i) limited access to the SFCs due to frequently high levels of insecurity, (ii) large population movements that have decreased the number of people directly going to the SFCs, (iii) limited access to several localities due to insecurity that has impeded malnourished people from benefiting from the OWs and CHWs screening and sensitisation sessions, and, (iv) strong beliefs (that continue to dominate a large number of women) that the poor health status of children is due to witchcraft (indeed, witchcraft is still blamed in some remote areas for weakening children. As a result some women resent screening sessions for being a waste of time as they think no medical treatment will improve their children's health. Further sensitization is required in order to change people's health behaviour and perceptions).

Given the SFP incapacity to reach the 64% planned, one might have to consider the indicator as unrealistic. Indeed AEDS for sanitary coverage stipulates that a mere 30% is satisfactory.[3] Therefore covering 30% of the children under 5 is judged to be more than acceptable by some authorities. Moreover, the indicator of 64% to be realistic should have been based on a nutritional survey that would have given scientific figures on the malnutrition rates and therefore the program's ability to reach the malnourished. When the proposal was established and the indicator of 64% defined, the program had managed to reach (in 2003) 59% of malnourished children under 5 – at that time the security situation in Bujumbura Rural had improved and it seemed realistic to attain such a result. Subsequent events have shown this to have been something of a false dawn.

To a large extent, the security situation, rather than the program design, led to the nature of the results. If the security situation was better, screening activities would have been increased and the percentage of the population reached also increased significantly. Moreover, in order to decrease the malnutrition rate without having to rely on beneficiaries' direct access to SFCs or on access to sensitisation campaigns, consideration must be given to an assessment of the feasibility of community based nutrition activities.

In particular, the Positive Deviancy (PD) Hearth approach, which examines the feeding habits, hygiene practices and food 'habits' of poor families with healthy children as examples for poor and/or richer families with unhealthy children. It seeks to define menus which are nutritionally healthy and are affordable for the most vulnerable members of the community. Hearth sites that rely on local resources are then set-up in order to prevent and treat cases of malnutrition. Mothers are taught nutrition basics and health care practices and are also shown how and what to cook in order to retain essential vitamins (for example). Mothers are responsible for running these hearth sites and therefore disseminating their newly gained knowledge to as many other mothers as possible while taking care of malnourished children. The

[3] Association européenne pour le développement et la santé, *Health information system*, 2000

possibility also exists for the program's geographical coverage to be extended into remote areas which have difficulties accessing the SFCs or where CHWs/OWs rarely go.

In order to increase the program's support to severely malnourished children in particular, future options will include an analysis of the feasibility of Community Therapeutic Care (CTC) in Bujumbura Rural. There are several acknowledged benefits to CTC including shortening treatment periods for severely malnourished children (due largely to the use of Ready to Use Therapeutic Food (RUTF) as well as a mixture of Corn Soya Blend (CSB) and oil distributed at the Therapeutic Feeding Centres). The RUTFs are composed of highly nutritional local products and are therefore easy to make. Discussions will be held with other intervening agencies in Bujumbura Rural to discuss the implementation of the new approach if the feasibility study findings prove encouraging.

e. Success stories

As already mentioned, the SFCs have worked well during the reporting period. The following story exemplifies the SFC capacity to treat malnourished children.

Misigaro is a young boy of 5 years old. He and his sister Imelda who is 11 years old are taken care of by their grandmother following the death of both of their parents. Their parents died during attacks on Karenzi (a zone of Mutambu commune) led by the Front de Libération Nationale (the only rebel group that has refused to sign the cease-fire agreed in November 2003). They live in a small house that is covered by UNICEF sheeting. They have no cattle and have to rent out a small parcel of land in order to grow manioc and beans. Misigaro's health condition is poor. He suffers from chest pains and his grandmother has been unable to afford medical care for her grandson.

Salvator, one of the SFP's OWs, as part of his daily duties, screened children less than 110cm high. His anthropometrics measures were taken using the MUAC and Misigaro was diagnosed with moderate malnutrition, as his MUAC was below 125 mm. The outreach worker provided Misigaro' sister with a referral card to the Karenzi SFC for her young brother and made arrangements with MSF-CH (in charge of the Health Centre of Karenzi) to treat Misigaro for his chest pains. Imelda accompanied her brother to the SFC and to the Health Centre. After two weeks of supplementary feeding rations and drugs provision for his chest pains, Misigaro has recovered. Follow-up of Misigaro health status by the OW proves encouraging. As little as two weeks of treatment are sometimes sufficient to save children from becoming severely malnourished.

The program has increased mother's knowledge of good feeding practices and signs of malnutrition. It is hoped that this gained knowledge will not only be disseminated by the CHWs but also by the mothers. The following story indicates that this is taking place:

Léonie is a young mother of 22. Her son of 20 months, Janvier, has benefited from the Mayuyu SFC distributions. During the exit interview, Léonie mentioned that her neighbor had gone to the traditional healer to have her son's oedema incised. She strongly stated that she would talk her friends and family and recommend that they visit the SFC as well as the traditional healer. With a more comprehensive understanding of nutrition, Léonie is able to recognize symptoms of malnutrition and she will be able to advise her neighbors as well as care for her family.